



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/733,788	12/07/2000	Joshua I. Pine	00CXT0433I	2571
49413	7590	12/15/2005	EXAMINER	
ESS TECHNOLOGY, INC C/O HAYNES BEFFEL & WOLFELD LLP P.O. BOX 366 HALF MOON BAY, CA 94019			HENN, TIMOTHY J	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/733,788

Applicant(s)

PINE, JOSHUA I.

Examiner

Timothy J. Henn

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-9,16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-9,16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 September 2005 has been entered.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5-7, 9, 16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingetsu et al. (US 6,181,379) in view of Kihara et al. (US 2001/0009438 A1)

[claim 1]

Art Unit: 2612

In regard to claim 1, note that Kingetsu discloses a color imaging system comprising (Figure 1): a color imager having a plurality of photocells producing electrical responses that correspond to chromatic intensity values (Figure 1, Item 11), and the electrical responses from the plurality of photocells together comprising a captured color image (c. 2, ll. 39-60); and an image processor that determines whether the captured image is substantially achromatic (c. 11, 44-61), and if so, renders each of the electrical responses as an achromatic luminance value (c. 12, ll. 1-17). However, Kingetsu does not disclose a white balance function.

Kihara discloses an imaging device which includes amplifiers (Figure 2, Items 13R, 13G and 13B) connected to the outputs of red, green and blue CCDs which make adjustments to the output signals in order to obtain correct black and white levels (Paragraph 0044). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include amplifiers for the red, green and blue CCDs of Kingetsu to obtain correct black and white levels (i.e. white balance the image). The examiner notes that in the combination of Kingetsu and Kihara the image is white balanced by multiplying each of the red, green and blue values by white balance coefficients (i.e. gain value of the amplifiers 13R, 13G and 13B) without interpolating the values. The white balanced image would then be subject to the processing described by Kingetsu after being converted to digital through A/D converter 110.

[claim 5]

In regard to claim 5, note that Kingetsu discloses a color imaging system wherein the image processor is further configured to determine whether the white-balanced image is substantially black and white and if so the image processor converts each of the chromatic intensity values as a black and white luminance value (c. 11, l. 44 - c. 12, l. 10).

[claim 6]

In regard to claim 6, note that Kingetsu discloses a color imager which is a scanner (i.e. scanning type imager; c. 2, ll. 49-60). Therefore, it can be seen that Kingetsu lacks a constant, known light source. However, it is notoriously well known in the art to include constant, known light sources on cameras in the form of flashes in order to illuminate weakly lit scenes (Official Notice). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a flash in the camera of Kingetsu to be able to illuminate weakly lit scenes.

[claim 7]

In regard to claim 7, note that Kingetsu discloses a color imaging system wherein the color image capture device and image processing circuitry are disposed within a single device (Figures 1 and 2).

[claim 9]

Regarding claim 9, Kingetsu lacks an image-type specification control that allows a user to select from among a plurality of image formats that determines how the image processor converts the white-balanced color image. Official Notice is taken that it is notoriously well known in the art to allow the user to select from a plurality of resolutions

Art Unit: 2612

in which to save the captured image to allow more low resolution images or fewer high resolution images to be stored. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an image-type specification control in the camera to allow the user to specify the desired resolution at which the images will be stored.

[claim 16]

In regard to claim 16, see claim 1.

[claim 18]

In regard to claim 18, note that Kingetsu discloses detecting whether the image is a substantially black-and-white image, and if the image is detected to be a substantially black-and-white image, converting the plurality of chromatic intensity values to a plurality of black and white values (c. 12, ll. 1-10).

[claim 19]

In regard to claim 19, note that Kingetsu discloses all limitations except for steps of computing mean and standard deviation values of a color saturation distribution of the image, and comparing the mean and standard deviation values to a plurality of threshold values to detect whether the image is substantially gray scale. However, it is well known in the art to determine whether an image is substantially achromatic to comparing statistical values such as the mean and standard deviation with threshold values to quickly and easily determine if an image is color or achromatic (Official Notice). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to compare statistical values of the image data to

determine if the image is achromatic in the achromatic image determination step of Kingetsu.

[claim 20]

In regard to claim 20, note that Kingetsu discloses all limitations except for steps of computing mean and standard deviation values of a luminance distribution of the image, and comparing the mean and standard deviation values to a plurality of threshold values to detect whether the image is a substantially black and white image. However, it is well known in the art to determine whether an image is substantially black and white to comparing statistical values such as the mean and standard deviation with threshold values to quickly and easily determine if an image is color or black and white (Official Notice). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to compare statistical values of the image data to determine if the image is achromatic in the black and white image determination step of Kingetsu.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kingetsu et al. (US 6,181,379) in view of Kihara et al. (US 2001/0009438) in view of Matsui (US 5,448,292).

[claim 8]

In regard to claim 8, note that Kingetsu in view of Kihara discloses all limitations except for a white balance function which allows the user to select from among a plurality of white-balance settings. However, white balance which allows the user to

select from among a plurality of white-balance settings is well known in the digital camera art, see for example Matsui. In particular, Matsui discloses a white balance function white allows the user to specify a kind of light source by manually operating a device or "switch" (c. 2, ll. 12-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a white balance function as taught by Matsui in the camera of Kingetsu to ensure that real life white objects appear white when photographed in different types of light.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/733,788
Art Unit: 2612

Page 8

TJH
12/5/2005



NGO YEN VU
PRIMARY EXAMINER